

Available online at www.sciencedirect.com**ScienceDirect**

Procedia - Social and Behavioral Sciences 90 (2013) 513 – 521

Procedia
Social and Behavioral Sciences6th International Conference on University Learning and Teaching (InCULT 2012)

Students' Practicum Performance of Industrial Internship Program

Norina Ahmad Jamil^{a*}, Sariwati M Shariff^b, Zurah Abu^c^{a,b}*Faculty of Business Management, Universiti Teknologi MARA, 40450 Shah Alam, Malaysia*^c*Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA, 78000 Alor Gajah, Malaysia*

Abstract

This study was carried out on final year degree Business Management students between the years 2010 and 2011 with the objectives to analyse industry feedback on students' practicum performance and their learning outcomes at the end of industrial practicum attachment. A total of 623 industrial evaluation reports from various industries were analyzed; focusing on two main components: cognitive outcomes and skills development outcomes of the students upon completion of a 20 weeks practicum. Feedback from the industries indicated that these students had acquired meaningful work knowledge, demonstrated good working skills with the right attitudes at the work place as deduced from the total mean scores 4.16 for these outcomes. The overall written comments were also favourable and this suggested that the industrial practicum training briefings, practicum curriculum and guidelines developed by the faculty has positive impact on these students prior practicum attachment to the industry. However, there are still areas for continual improvement to ensure students are well-prepared for practicum, further soft skill development and to improve the quality of their project papers.

© 2013 The Authors. Published by Elsevier Ltd. Open access under [CC BY-NC-ND license](http://creativecommons.org/licenses/by-nc-nd/4.0/).

Selection and/or peer-review under responsibility of the Faculty of Education, University Technology MARA, Malaysia.

Keywords: Industrial practicum training; cognitive outcomes; skills development outcomes; learning outcomes

1. Introduction

Industrial internship is an important part of an academic curriculum in higher education institutions. An internship is an opportunity for undergraduate students to incorporate work-related experience and knowledge into their formal education in a university by taking part in supervised and planned work in real-world professional environments (Sumathi, Zainal and Chong, 2012). NACE (2011) has defined an internship as a form of experiential learning that integrates knowledge and theory learned in the classroom with practical application and skills development in a professional setting. Internships give students the opportunity to gain valuable

* Corresponding author. Tel.: +603-32585174; fax: +603-32585111

E-mail address: norina0048@salam.uitm.edu.my

applied experience and make connections in professional fields they are considering for career paths; and give employers the opportunity to guide and evaluate talent.

The National Association of Colleges and Employers (NACE) has reported that recent economic events have caused a downturn in college hiring plans for nearly all employer types and geographic regions in 2009 (Gault et al., 2010). Sumathi et al., 2012, has reported that recently in Malaysia, there has been much concern on the mismatch of the quality of university graduates with that of industrial expectations. Many undergraduates churned out by our universities lack essential “job market readiness”, which in turn, contributes to the increase in the number of unemployed graduates in the country. All these have prompted the government to place more emphasis on university students’ industrial internship program during the course of their studies.

There were many reports and research being carried out on this issue back then (Shariff, 2006); and findings were reported such as: universities produced business graduates who are hardly trained in business operations and the curricular program were not taught in integrated manner (Singaraju, 2004). Employers and academic researchers had identified gaps between corporate needs and graduates’ attributes. These gaps indicated graduates had little real world experience, lacked communication, teamwork and problem solving skills as well as having poor working attitudes.

Employers expect graduates to have already possessed some skills and expertise that are rarely available in a university setting. Graduates need opportunities to work in teams to develop initiative, persistence and integrity (Maistre, C.L and Pare, 2004). Providing them with exposure and real world experience can help improve graduates’ capabilities through internships, apprenticeships or industrial training attachment. There is a need for both university training (for disciplinary knowledge) and on the job training (for practical knowledge). It is necessary to incorporate exposure of the work place into the university context. There is a need to help students move from the “book and theories” to the “real clients and real work places” (Maistre and Pare, 2004).

Local institutions of higher learning should develop programs that match future skills and knowledge requirements of the global businesses in the 21st century, and integrative learning processes that not only emphasized on functional skills but also to inculcate communication skills, the ability to learn continuously and operational focus within the graduates (MOHE, 2006). Formal education is now no longer sufficient to guarantee one’s future, let alone job employability. Hence, businesses, industries and the academia must cooperate to provide more real world opportunities for students to be trained, develop and ready for the job market (Shariff, 2006). Therefore, this research was conducted to determine student’s evaluation by host organization in terms of their cognitive (knowledge) and psychomotor (skills). Moreover, the faculty also wants to gather feedback from the industry pertaining to the practicum program and students’ performances for future improvement towards attaining OBE and MOHE soft skills.

2. Literature Review

For the last decade (1998-2008), countries such as USA, UK, Australia and Singapore have developed various forms of Outcome-Based Education (OBE) (Alam Sher Malik, 2009, McNeil et al., 2006, Spady 1993:1988 and Zepke and Leach, 2007). This is a challenge for Malaysia to be competitive and to become an education hub in this region. As from 2009, education in Malaysia and this local public university too are now initiating the transformation journey towards OBE. OBE curriculum design adopts students’ focus, emphasizing on students’ self-directed learning and active participation, measurable teaching-learning, structured and standardized rubric assessments, management review and taking continual improvement action towards realization of the program educational objectives (PEOs) and program/courses outcomes (POs) with quality assurance (Jantan 2010 and Shariff et al., 2008). Malaysia is now progressing fast in its last lapse of nine years towards becoming a developed nation by 2020 (10MP). The aspirations to become a high income economy can only be realized with human capital development by producing knowledgeable and skilful graduates equipped with high value-added practical skills at every level. There is a need to produce qualified and competent graduates that correspond to the needs of the Malaysian development economy; thus there must be a strong emphasis on practical learning approach (Rosti, 2006 and MOHE, 2006). From human resource development perspective, industrial practicum

training emphasizes on job focus and the human itself. Practicum training or connoted as on-job-training (OJT) or internship training (Shariff et al., 2008) is applications driven and aims to impart skills and applications at work in real life situations. It serves to develop a person towards some form of positive growth that embraces the realities of environment, as well as to achieve organizational goals and objectives and actualization of inner reality of emerging self (Knowles, Holton and Swanson, 1998). Hence, students should be required to undergo six months practical training in the private sector so that they would be able to acquire practical work experience (MOHE, 2006).

2.1 Industrial Practicum Training

Students who have gone for industrial or internships reported of significant learning outcomes, their communication skills improved and exhibited significant personal growth (Klink and Streumer, 2002 and Knemeyer et al., 2002). Industrial practicum training involves three main parties; firstly, the trainee undergoing the practicum, secondly, the facilitator from the host organization, and thirdly, the institution that requires practicum requirements (Shariff et al., 2008). Host organizations are organizations that voluntarily provide training for the undergraduates to facilitate trainees with job related competencies through OJT. Host organizations are expected to provide adequate training, job skills and work experience to these trainees at the work place so that it is meaningful for the trainees to gain work experiences. The trainees on the other hand expect to acquire much practical knowledge, gain experiences, job skills from the training; the institution expects the organization to provide training opportunities and also hopes the trainees acquire as much skills and knowledge in the training. Practicum provides the activities, the context and culture of the organization for practical learning in real situations (Maistre and Pare, 2004, Meriam 2001 and Nowlen, 1988). Basically, the institutions and the industry expect the students to maximize learning through applications and practices, to assist in the organizational works and operational tasks and activities and to be involved in problems solving. However, the execution on the practicum is the onus of the host organizations, and institutions have not much intervention in the conduct of training for their students. Thus, adopting a negotiating interest approach in program planning, institutions can play some active roles in planning the industrial training together with the organizations (Ms. Clara and Dr Sonia, 2011). There is a concern for the institutions to improve on their roles and managing the industrial training program, as well as to strengthen the industrial training program from the academic and learning perspectives (Noe, 2003 and Nowlen, 1988).

In 2007, the Faculty of Business Management had incorporated a new practicum curricular structure for its degree programs (Academic Study Plan, 2006). The objective of practicum is to expose undergraduates to the realities of life in the working environment and to synthesize knowledge acquired in formal education into practice.

2.2 Practicum Evaluation

Kirkpatrick's model emphasized four evaluation levels to evaluate the effectiveness of a program: reaction, learning, behavior and results. Firstly, the reaction level implies how a participant reacts to the program: which is a measure of customer satisfaction. The second level: the learning and the extent to which participant has acquired knowledge; third and fourth level: the change in skills and attitudes as measurable results of attending the program. Learning has indeed taken place when the participant is able to demonstrate the required knowledge, has the ability to perform (skills) and the attitudes have changed (Kirkpatrick, 1998).

The scope and context of the practicum training is outlined in the Practicum training curricular structure (FBM Academic Plan). Student' placement in the departments in the host organizations are preferred to be in accordance with their field of specialization in their respective academic programs. For examples: Operations Management students are to be placed in Purchasing or Production Planning Department; and Human Resource (HR) Management students are to be attached with HR Department.

Training evaluation is an important tool to assess the learning impact on the participant. Evaluation determines whether the training satisfies the needs of a trainee, the institution or organization; and primarily to ascertain whether there is knowledge, skills and attitude change in the trainee and also return of investment to the institution or organization (Kirkpatrick, 1998).

2.3 Learning Evaluation

An educational program must have clear and defined objectives which are commonly defined in three learning domains: 1) cognitive domain dealing with knowledge and intellectual abilities and skills; 2) affective domains dealing with attitudes and values; and 3) psychomotor that include all human senses and dimensions (Bloom, 1956, Spady, 1994). On-the-job training (OJT) is suitable for new, inexperienced trainee in learning through observing peers or managers performing the jobs; trying to imitate the work processes or behaviour and doing the tasks (Noe, 2003).

Learning is the process whereby knowledge is created through transformation of experience; the interaction between content and the experience whereby each transforms the other (Merriam, 2001 and Merriam and Cafferella, 2008). The previous study (Shariff, 2006 and Shariff et al, 2008) done on practicum students' acquisition of job knowledge, skills and attitudes that indicated that these trainees (students) had the desire and motivation to learn and they had learnt much about their host organizations, products /services, operations and systems of works. However, this study lacks reports on students' performance evaluations by the industry. Even though workplace is deemed a site for learning, there is still a lack of empirically-based research on competence development, continual learning and lifelong at workplace (Ms Clara et al., 2011). Hence, it is also proposed that a study needs to be carried to evaluate the new practicum evaluation's effectiveness and to determine the industry's evaluation on present practicum students throughout 2010. This proposed study is also timely to gather input for the forthcoming OBE design curricular structure for practicum due in 2012.

2.4 Soft Skills Evaluation

OBE curricular design emphasizes desired learning outcomes and its curriculum, instructional materials and assessments are created to support these intended outcomes (Bloom, 1956, Jantan, 2010 and Modul Insaniah, 2006). OBE principles also emphasize on higher level of thinking. It involves students in a complete course of learning. Hence, the new intake of students in institutions of higher learning from 2010, must now be engaged in active participation in their course of study and self-learning in OBE- design academic program. They must demonstrate their learning skills through doing challenging tasks such as: writing project proposals, doing or completing a project, analyzing case studies and doing presentations, to mention a few (Shariff et al., 2011).

The primary focus on OBE programs not only lies on students being top scorers and getting high grade points average (GPA), the courses are to be evaluated too on its course outcomes (COs) and learning outcomes (LOs) (Felce, 2011, Billet, 2000 and Jantan, 2010). COs are as what students will be able to do upon the completion of the program (Alam Sher Malik, 2009, Felce, 2011 and Cornford and Athanasou, 1995); with LOs and POs (program outcomes) are specific, measurable, assessable as to what a student will be able to do at the end of a period of study (Malaysian Qualification Framework, 2008 and Modul Insaniah, 2006).

Table 1. PEO-PO

Program Educational Objectives (PEOs)	Program Outcomes (POs)
Three years after graduation, the business graduates of this university will be:	
Competent business practitioners who diligently apply their business knowledge and skills with continuous enhancement in lifelong learning.	1, 2, 7
Business practitioners who are team players and problem solvers with effective human, ICT and communication skills.	3, 4, 5
Business practitioners who explore new opportunities and demonstrate leadership skills.	8, 9
Socially responsible business practitioners with high moral conduct.	6

The secondary focus on OBE lies on the ability of the academic programs towards producing graduates that meet the job market requirements, the quality graduate attributes of the university and MoHE requirements. Graduates need to possess generic skills, good communication skills with the impetus to keep on learning; for example: the ability to search for information and to make decisions, the ability to use technology and to comprehend social issues and the links to individuals, organizations and business (MOHE, 2006). This particular university has identified seven graduate's attributes in its academic blueprint (2010-2015) while the Ministry has endorsed nine graduate attributes (Malaysian Qualification Framework, 2008). The Faculty of Business Management of this institution has adopted the nine MoHE/MQA attributes into its OBE programs, effective July 2010. Hence, apart from developing students' soft skills, soft skill evaluation also needs to be carried out simultaneously in program and students' outcomes. Refer to Table 2.

Table 2: PO-LO (MoHE)

Upon completion of the degree BM programs, the students would be able to: (POs)	MoHE Learning Outcomes (LOs)
Apply business management fundamentals. (PO1)	Knowledge (LO1)
Apply systematic approach in solving business problems. (PO2)	Practical skills (LO2)
Use appropriate methodologies to gather and analyze information pertinent to decision-making. (PO3)	Thinking & scientific skills (LO3)
Demonstrate effective communications skills in business environment. (PO4)	Communication skills (LO4)
Work in a team. (PO5)	Teamwork skills (LO5)
Analyze and critique business decision within ethical framework. (PO6)	Values, ethics & moral (LO6)
Relate current events in their specialized area. (PO7)	Lifelong learning (LO7)
Integrate entrepreneurial skills in business decisions. (PO8)	Entrepreneur skills (LO8)
Exhibit leadership skills. (PO9)	Leadership skills(LO9)

3. Methodology

This research was conducted using Form A (Evaluation by Industry). These forms were introduced in Business Management degree programs curricular structure effective 2007 after the curriculum review was done in 2006. These forms were created based on the findings of the study carried out by Shariff, Saad and Ibrahim (2005 - 2006). Form A is to be filled up by the supervisors in the industry which evaluates the students' performances and learning outcomes.

Form A indicates how the host organization ranks them based on three components: cognitive development, skills development, and attitude during their internship with host organization. The questionnaires were developed using a five-point Likert scale to measure host organization's feedback, with "1" for "unsatisfactory", up to "5" for excellent. It also indicates the open-ended question on comments from supervisor and area that students should be improved. Although there are four parts in this form, only three areas have been discussed - cognitive development outcomes, skills development outcomes and comments from employer's perspectives. Data entry and analysis was done using SPSS version 16.0 to generate descriptive statistics, frequency and percentages, mean scores and standard deviations.

4. Result and Discussion

4.1 Demographic profiles

In total, the 623 of form A were successfully collected by the respective coordinators. And out of it, 76.1% of the respondents are female while remaining 23.9% are male as in Table 3. It shows that female students

dominated over the male students in doing their practicum at host organization. The majority (30.98%) of students who underwent the practical training came from Islamic Banking program.

Table 3: Demographics profiles of respondents

Profiles	Description	Percentage (%)
Gender	Male	23.90
	Female	76.10
Program	Islamic Banking	30.98
	Finance	25.52
	Operations Management	14.29
	Human Resources	13.16
	International Business	5.46
	Retail Management	5.30
	Marketing	3.53

4.2 Cognitive Development Outcomes

Table 4 below showed the highest outcomes being rated by the host organization is the internship's learning capabilities in new task ($\mu = 4.35$, $SD = 0.615$) followed by knowledge acquisition in doing task or assignments ($\mu = 4.15$, $SD = 0.606$), self directed learner ($\mu = 4.14$, $SD = 0.758$) and knowledge application and creative thinking abilities ($\mu = 4.02$, $SD = 0.687$). This implied that students had positively demonstrated the expected cognitive (learning and intellectual) outcomes as desired in the practicum program outcomes.

Table 4: Internship's Cognitive Development Outcomes

Description	Mean	Std. Deviation
Knowledge acquisition in doing tasks/assignments	4.15	.606
Learning capabilities in new tasks/jobs	4.35	.615
Knowledge application and creative thinking abilities	4.02	.687
Self directed learner	4.14	.758

Likert scale: 1: Poor; 2: Weak 3: Average; 4: Good; 5: Excellent

4.3 Skills Development Outcomes

Table 5 indicated that the highest means score is social and human interrelation skills ($\mu = 4.33$). The analysis demonstrated that the students have no problem in adapting to the organization's culture and can interact with other peoples at all levels in their internship. This results implied that the learning outcomes on LO5 (team work and social skills) were achieved. The host organization also had acknowledged the internships on computer literacy; ($\mu = 4.30$); communication skills ($\mu = 4.13$) and management skills ($\mu = 4.09$). Meanwhile, the lowest rank is problem solving ($\mu = 3.91$); this was expected as the students were still young and this was the first time they were exposed for internship in organizations.

Table 5: Internship's Skills Development Outcomes

Description	Mean	Std. Deviation
Level of tasks/job/management skills	4.09	.689
Level of problem solving/analytical skills	3.91	.710
Communications and language proficiency skills	4.13	.710
Social and human interrelation skills	4.33	.701
Computer and system (ICT) application skills	4.30	.639

Likert scale: 1: Poor; 2: Weak 3: Average; 4: Good; 5: Excellent

4.4 Employer's Perception

Based on results tabulated in Table 6, positive comments were given to 618 trainees out of 623 (99.20%). A majority of the comments from the host organization are: positive attitudes, hardworking, responsible and very dedicated had the highest score (47.03%). Although only 0.8% of the feedback (which is relatively low) that indicated the students needed to improve themselves, this weakness need to be addressed too. Examples of this feedback are: low self-confident and to improve on skills. Table 6 shows the positive comments on the trainees from the employer's perception.

Table 6: Employer's Perception

Item	No. of trainees	Percentage (%)
Positive attitude	293	47.03
Fast learner	126	20.22
High motivation level	65	10.43
Need to improve skills and self-confident	5	0.80
Total	623	100.00

5. Conclusion and Recommendation

The two learning outcomes namely: (1) cognitive development outcomes and (2) skills development outcomes were utilized in evaluating the overall performance level of practicum students in the industrial practicum training. Based on the findings and results, a majority of the employers in host organizations reported good feedback for the UiTM practicum students. Results of this study revealed trainees from this university demonstrated excellent performance levels in terms of learning capabilities and social and human interrelation skills. Additionally, 99% host organizations provided written positive comments on these trainees. The employers' positive perceptions towards the practicum students reflect the industrial training program as effective and meaningful for business management undergraduates; and that all staff from the practicum coordinator and the lecturers (advisors) had delivered their commitments to ensure students adhered to the industrial training guidelines and expectations. Last but not least, it was the students themselves that had been able to demonstrate their abilities and competencies and applied what they had learnt in class in their internship program.

The collaboration needed between the university, the students (trainees), and the employers (host organizations) in the industry in negotiating the training-learning (practicum) contract will enable students not only to complete their academic studies (achieving the learning outcomes) successfully but to also satisfy the employer's needs and job market needs (Felce, 2011). A well structured internship program will ensure greater opportunities for the interns to gain the much needed working experience. Both industry and university can work

together to develop a comprehensive industrial internship program that will provide relevant practical experience and knowledge to the students (Sumathi, Zainal and Chong, 2012).

The employers or host organizations should realign their reasons for taking students for practicum attachment and work-based learning; and ensure that these students or trainees are adequately trained and progressively developed. Students should be seen as good value for money rather than cheap labour; and in all respects should be treated the same way as their employees. Examples of this includes being given fair opportunity to carry out authentic tasks, treatment, adequate recognition and appraisal (Shariff et al., 2008, 2011). Achieving the OBE learning and program outcomes are the driving thrusts for both institutions of higher learning and the industry to produce graduates that meet the quality attributes for human capital development and nation building (10MP).

The University should also focus on some issues such as problem solving; creative thinking and self confidence to enhance the students' employability in future after graduating. In parallel with Sumathi et al., 2012, an improvement in academic curriculum and teaching methods such as that which emphasize student-oriented thinking and career development are among the appropriate solutions.

It is also recommended that continual studies be carried out in the future to determine industry evaluation on practicum for business management students. If the students perceived that they have benefitted from the practicum, then the industries too must have benefitted from these students. Besides that, the researchers can also conduct a study on the students' needs and perceptions of the host organization. This will be a good comparison for both students and the host organization itself that will help to determine the requirement of the internship program.

Acknowledgements

Acknowledgement and thanks go to the research team members and the Coordinator for Industrial Practicum in the Faculty Business Management in 2011-2012. Thanks to Research Management Institute (RMI), Universiti Teknologi MARA, Shah Alam, Malaysia for providing the Excellence Fund grant to conduct this study.

References

- Alam Sher Malik, Outcome-based Education is the Way of the 21st Century. *New SundayTimes*, 2009. March 15.
- Felce A. (2011). Cross-University Collaboration for Work-place Learning: A case Study. *Journal of Higher Education, Skills and Work based Learning*. Volume 1, pp. 63-77: Emerald Group Publishing Limited.
- Bloom, B.S. (1956). *Taxonomy of Educational Objectives, Handbook I: Cognitive Domain*, New York: McKay.
- Ms. Clara Mutti, Dr Sonia Maria Guedes Gondim (2011). *Affections in Learning Situations: A Study of an Entrepreneurship Skills Development Course*. Journal of Workplace Learning. Vol. 23, Issue: 3. <http://www.pmo.gov.my> (Archive Speech by Prime Minister Malaysia. Downloaded on February 2011).
- Jantan, J. (2010). *ILQAM OBE Curriculum Design Manual*, UiTM. March 15, 2010.
- Knowles, M.S (1980). *The Modern Practice of Adult Education: From Pedagogy to Andragogy*. (2nd ed.), New York: Cambridge Books.
- Jack Gault, Evan Leach, and Marc Duey (2010), Effects of Business Internships on Job Marketability: The Employers' Perspectives. *Journal of Education + Training*, Vol. 52 Iss:1 pp. 76-88.
- Knemeyer, A.M., and Murphy, P.R. (2002). Logistics internships: employer and students perspectives. *International Journal of Physical Distribution and Logistics Management*, Vol. 32. no.2, pp. 135-152.
- Maistre, C.L., and Pare, A. (2004). Learning in two communities : the challenge for universities and workplaces. *Journal of Workplace Learning*, Vol. 16, no.1/2, pp.44-52.
- Malaysian Qualification Framework. Malaysian Qualifications Agency (2008). <http://www.mqa.gov.my>
- Malaysia SME. October- November 2010. Human Capital Development to the Fore. KKD:PP15552/05/2011.
- McNeil, H.P., Hughes, C.S., Toohey S.M., Dowton, S.B. (2006). An Innovative Outcomes-Based Medical Education Program Built on Adult Learning Principles. *Medical Teacher*. Vol.28, No. 6.
- Merriam S. B. (2001). *The New Update on Adult Learning Theory*. San Francisco: Jossey Bass Publishers.
- Merriam S.B., and Cafferella, R.S. (2008). *Learning in Adulthood: A Comprehensive Guide*. (3rded.) San Francisco: Jossey Bass Publishers. Ministry Higher Education; <http://www.mohe.gov.my>
- MoHE Report (2006). *Towards Excellence*. Ministry of Higher Education, UPENA. Universiti Teknologi MARA, Malaysia. *Modul Pembangunan Kemahiran Insaniah untuk IPTA*, 2006. (Translation: *Module for Soft skills Development For Public Universities*, 2006). MOHE. Universiti PUTRA Malaysia.
- Noe, R.A. (2003). *Employee Training and Development*. McGraw Hill International Ed.
- National Association of College and Employers (2009), *Job Outlook 2009*, available at: www.nacweb.org

- Rosti Saruwono (2006). Development of Human Capital: Issues and Challenges. Conference Proceedings in 5th Asian Conference of the Academy of HRD, 2006.
- Spady, W. (1993; 1988). *Outcome-based Education*. Belconnen, ACT; Australian Curriculum Studies Association; Organizing for Results: The Basis of Authentic Restructuring and Reform. *Education Leadership*. Vol.46, No 2.]
- Spady, W. (1994). Choosing Outcomes of Significance. *Educational Leadership*. Vol.51, No.6, pp 18-22.
- Spady, W. (1995). We need more Educentric Standards. *Educational Leadership*. Vol.53, No.1, pp. 82-84
- Case Study for Operations Management undergraduates. Conference Proceedings, 3rd International Conference University Learning And Teaching (INCULT 2006) 14-15th March 2006.
- Shariff, S. (2007) et. al. Guidelines for Effective Industrial Practicum Training and Project Paper. UPENA, Universiti Teknologi MARA. Malaysia.
- Shariff, S. et al (2008). *Industrial Practicum Training Among Operations Management Students: A Case Study in Malaysia*. An unpublished doctoral dissertation. Universiti PUTRA Malaysia.
- Shariff, S., Ahmad, N., Mohamed Esa, M. (2011). *OBE-SCL Design in Business Management Programs: A Case Study*. Proceedings in ICBEIA. June 2011. Malaysia.
- Shariff, S., Ahmad, N., Mohamed Esa, M. (2011). Readiness in OBE Implementation for Business Management Programs: Lecturers and Students' Perceptions. Proceedings in ACSSSR. June 2011 Malaysia
- Singaraju, S.P. (2004, June). *Business Schools Lack Holistic View*. New Straits Times. Kuala Lumpur.
- Tenth Malaysian Plan (10MP); Economic Transformation Plan, National Economic Transformation Plan, National Key Economic Areas; National Key Results Area; *Prime Minister Initiatives*. <http://www.pmo.gov.my>
- Zepke, N. and Leach, L. (2007). Improving Students Outcomes In Higher Education: New Zealand Teachers' Views On Teaching Students from Diverse Backgrounds. *Teaching in Higher Education*. Vol.12, No. 5-6, pp. 655-668.
- Kirkpatrick., D.L. (1998). *Evaluating Training Programs: The 4 Levels*. 2nd Edition. San Francisco.
- Klink, M.R., and Streumer, J.N. (2002). Effectiveness of on the job training. *Journal of European Industrial Training*. *Journal of European Industrial Training*, vol. 26, no. 2/3/4, pp.196-199.
- Knemeyer, A.M., and Murphy, P.R. (2002). Logistics internships: employer and students perspectives. *International Journal of Physical Distribution and Logistics Management*, vol. 32. no.2, pp. 135-152.